



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER OF PATENTS AND TRADEMARKS
Washington, D.C. 20231
www.uspto.gov

| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|-----------------|-------------|----------------------|---------------------|------------------|
| 09/473,765 | 12/29/1999 | MARKO PARIKKA | 297-009122-U | 1440 |

7590 06/19/2002

CLARENCE A. GREEN
PERMAN & GREEN LLP
425 POST ROAD
FAIRFIELD, CT 06430

EXAMINER

SEMBER, THOMAS M

ART UNIT PAPER NUMBER

2875

DATE MAILED: 06/19/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.
09/473,765

Applicant(s)

Parikka et al

Examiner
Thomas Sember

Art Unit
2875



-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136 (a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on Apr 3, 2002.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-28 is/are pending in the application.
- 4a) Of the above, claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-28 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claims _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
*See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s). _____ 6) ☐ Other: _____

Response to Amendment

Claim Rejections - 35 USC § 112

1. Claims 1 and 17 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

- 1.) In claim 1, line 4 “first surface” should be --a first surface”
- 2.) In claims 23, 25 and 27, line 3 “first surface” should be --a first surface”

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless --

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 1-10, 12 and 15-28 are rejected under 35 U.S.C. 102(b) as being anticipated by Shiono et al. Shiono et al discloses a light pipe 12 limited by a certain first surface. The surface comprises two-dimensional patterns 21 that are pixel-like. The patterns 21 have diffractive properties for coupling the light out of the light pipe. The patterns further comprise uniform, mutually different areas with a distribution on the first surface including close to the light source.

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless --

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

5. Claims 1-10, 12 and 15-28 are rejected under 35 U.S.C. 102(b) as being anticipated by (Watanabe et al or JP 61-25585). (Shiono et al or Watanabe et al or JP 61-25585) discloses a light pipe limited by a certain first surface. The surface comprises two-dimensional patterns that are pixel-like (see tables two and three of the Watanabe et al reference and figure 2 and the partial translation of JP 61-35585). The patterns have diffractive properties for coupling the light out of the light pipe. The patterns further comprise uniform, mutually different areas with a distribution on the first surface including close to the light source.

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claims 11 and 13-14 are rejected under 35 U.S.C. 103(a) as being unpatentable over (Shiono et al or Watanabe et al or JP 61-25585). (Shiono et al or Watanabe et al or JP 61-25585) discloses the claimed invention except for the specific fill ratios and period lengths of the diffractive surfaces. It would have been an obvious engineering design choice to modify the diffractive surfaces of (Shiono et al or Watanabe et al or JP 61-25585) to meet applicant's

claimed parameters since the applicant fails to disclose any advantage or any unexpected results obtained in using the specific fill ratios and period lengths for the diffraction projections and it appears the projections of (Shiono et al or Watanabe et al or JP 61-25585) would perform equally well at diffracting light.

Response to Arguments

8. Regarding the Shiono et al reference, applicant's arguments filed on 06/03/02 have been fully considered but they are not persuasive. Applicants argue that Shiono et al fails to teach pixel patterns, a two-dimensional array or surface patterns close to the light source. The examiner disagrees. Shiono et al discloses a light pipe 12 limited by a certain first surface. The surface comprises two-dimensional patterns 21 that are pixel like. The patterns 21 have diffractive properties for coupling the light out of the light pipe. The patterns further comprise uniform, mutually different areas (their dimensions change in the X,Y and sometimes Z direction) with a distribution on the first surface. Furthermore, *as broadly claimed* "different orientations" reads on the two-dimensional pixel-formations that vary in the X, Y Z directions and these formations are all taught by (Shiono et al or Watanabe et al or JP 61-25585).

The applicant amended and added new claims in applicant's amendment and response filed on 04/03/02. The new claims and amended claims raised new grounds of rejection in view of the references of Watanabe et al or JP 61-25585 cited in the PTO-892 submitted herewith..

Conclusion

9. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a).

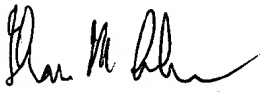
Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Thomas M. Sember whose telephone number is (703) 308-1938. The examiner can normally be reached on Monday - Thursday from 8:00 AM - 5:00 PM. The examiner can also be reached on alternate Fridays.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Sandra O'Shea, can be reached at (703) 305-4939. The fax phone number for this group is (703) 308-7724.

Any inquiries of a general nature or relating to the status of this application should be directed to the group receptionist whose telephone number is (703) 305-4900.



Thomas M. Sember
Primary Examiner

June 15, 2002